



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/831,855      | 08/23/2001  | Pratima Pai          | 851663.426US        | 9840             |

7590 10/19/2004  
Seed Intellectual Property Law Group  
Suite 6300  
701 Fifth Avenue  
Seattle, WA 98104-7092

EXAMINER

MUNOZ, GUILLERMO

ART UNIT PAPER NUMBER

2637

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

K.D

**Office Action Summary**

Application No.

09/831,855

Applicant(s)

PAI ET AL.

Examiner

Guillermo Munoz

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

Figure 1- Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Priority*

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

The first paragraph should be amended to include reference to parent application PCT/SG98/00094.

### *Specification*

The disclosure is objected to because of the following informalities:

The specification is objected to for the following reason, the phrase "A look-ahead depth parameter D may be an integer between 0 and 3" in page 6, line 27 and the phrase "Look-ahead depths of 0 and 1 are mandatory in the digital modem...look-ahead depths of 2 and 3 are optional" in page 6, line 28-30 appear to be contradictory statements. Examiner requires clarification for the allowable values of D. If 0 is an allowable value for look-ahead depth D, Examiner requires an illustration of the predetermined valid trellis path, with a look-ahead depth of 0.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Appropriate correction is required.

### *Claim Objections*

Claims 1, 2, 6, and 7, are objected to because of the following informalities:

Claim 1 is objected to for the following typographical error, the term "arc" should be replaced with the term "are" in line 14.

Regarding claim 2, the variable "i" needs to be defined.

Claim 6, line 23, "Stored" should be —stored—.

Claim 7, line 3 "a" should be "said/the".

Appropriate correction is required.

***Allowable Subject Matter***

Claims 1-15 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 1-15 are considered allowable because the present invention comprises a trellis encoder for spectral shaping having a predetermined valid trellis path used to assign an initial state to a first data frame and to assign states to subsequent data frames in a series of data frames. The closest art, Eyuboglu et al. (WO 98/45970) shows a similar circuit including an encoder for spectrally shaping a transmission signal by sign inversion rules represented by a trellis diagram in figure 9. However, Eyuboglu et al fails to teach assigning an initial state to a first data frame and assigning states to subsequent data frames up to a look-ahead depth based upon a predetermined valid data path. This distinct feature has been included in independent claims 1, 6, 10, 11, 12, 13, 14, and 15 rendering them allowable. Claims 2-5 and 7-9 are dependent on allowed claims 1 and 6, respectively, and are thereby allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

This application is in condition for allowance except for the following formal matters:

Specification language must comply with all Specification objections, as indicated above, or specifically traverse each objection not complied with.

Art Unit: 2637

Claim language must comply with all claim objections, as indicated above, or specifically traverse each claim objection not complied with.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045. The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GM  
October 14, 2004

  
JEAN B. CORRIELUS  
PRIMARY EXAMINER

10-18-04